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DISTRIBUTION ANALYSIS OF GREEN OPEN SPACE IN MAKASSAR

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ABSTRACT

This research was aimed at analyze the Green Open Space (GOS) in Makassar from the aspect of land expansion and its spread structure. This topic is repond to Global Warming. City has an imfortant role as the cause of global warming, because its lack of GOS as reductor of CO2 from flue gas of vehicle which is a main component of gas house. GOS is one of the main city components that it makes comfortable to live in. This research survey was to be done with descriptive analysis methods. Analysis techniques using table percentage and table skalogram. Technical data was collected by observation by an interview structured and spread a questioner and documentation. The results showed that the condition of open green space in Makassar for wide and distribution is not structured to follow the development of the city plan as set out in the regulation of the Minister of public works no. 5 in 2008. From the three districts that are being sampled, district of Ujung Pandang only has a green open space structure patterned to follow the development of pattern palynologic of the city. For GOS in village, from 12 villages, there are only six urban villages that have green space. Based on the analysis of the spread percentage schallogram GOS was 24 percent, which was still classified as a very low percentage.

Key words: Green open spaces, ministerial regulation, Planologic pattern

1. INTRODUCTION

The phenomenon of the Earth's warming, the degradation of environmental quality, and various environmental disasters have raised awareness and action together about the importance of maintaining the sustainability of development activities in the city, in order to ensure continuity and to save the life of the mankind in urban areas and in the face of the Earth in General. Therefore, the city as a center of cultural life and human civilization should continue to be addressed and directed to the development of its construction in a sustainable development.

Environmental circumstances surrounding psychologically affects the human physical and mental form. Therefore, a healthy environment needs to be developed in public life, especially in the big cities, where the result of the development of city residents and city rinsed rapid physical and less controlled, a result in almost all urban land used to build the buildings and facilities of the city.

The numbers of urban populations in Indonesia in 2015 were estimated to have exceeded population living in the countryside [1]. These conditions will give the implication on the high pressure on city space utilization [2]. As a result, every inch of urban land, even the surface waters such as rivers, marshes and beaches were used to build the infrastructure of the city. So that it may give rise to a tendency that any development and expansion town tries to maximization of existing spaces of the city, towards the minimization of the Green open spaces of the city and toward the life of the real and the artificial. As a consequence of these trends, it causes a decrease in the quantity and quality of green areas in urban areas as well as urban environment quality, which is also lowered, so that the direction of the development of the urban environment is only developing economically, but it decreases in ecology.

The construction of the city and the activity conducted was the biggest contributor of the warm environmental problems discussed by the experts of the current environment that is global warming caused by the green house effect. It is estimated that in the last hundred years, average temperatures around the world rise about 0.74 ± 0. 18°C and at the end of 2100 is expected to be an increase in air temperature of the earth about 1.5 - 4 ° C, if efforts to mitigate them are not made [3].

An increase in greenhouse gases as well as deforestation has reduced the ability of the forest, including open green space in the city in absorbing carbon dioxide (CO2) causes the onset of global climate change. The impact of global climate change can be felt in Indonesia in the form of various natural disasters. CO2 is the most important gas in increasing greenhouse effect, where in 1994, there was 93 percent in increased radiation is

caused by greenhouse gases CO2 of 15 percent by methane and the rest is N2O, NOx and CO. The biggest contributor of these gases is transportation and industry in urban areas[1

It is estimated that in the last 30 years green open space in big cities in Indonesia, such as Jakarta, Bandung, Surabaya, Medan, and Makassar has decreased significantly, from 35 percent in the early 1970s to 10 percent today [5]. A decrease in the quantity and quality of GOS in urban areas is also inseparable from understanding urban communities are still many Anthropocentric minded individuals [6] which looked at the urban environment as something that needs to be controlled to meet the needs of urban residents whose facilities continued to grow. This has resulted in urban areas that have not been built as open green space switch function into the urban facilities in the form of housing, shopping malls, and roads, without taking into account the environmental impact that will occur in the future.

GOS has the usefulness as a stabilization of urban ecosystem, either for the system of hydrology, climatologic, bio diversity, or other ecological systems. It aims to improve the quality of the environment, urban aesthetics, health, and quality of life, human well being. The ideal of open green space is 30 percent of the total area of the city. This is referring to the Earth Summit in Rio de Janeiro, Brazil in 1992, and reaffirmed at the Summit Johannesburg, South Africa in 2002 [7].

The Government has issued regulations to make the urban environment into a comfortable environment to live. It is about green open space. The regulation is regulation of the Minister of public works no. It sets about the needs of GOS of urban area ranging from neighborhood level to units of the Ministry of cities, as well as settings of the layout and the existing components in the GOS. This regulation has also been described GOS functions that include intrinsic function consisting of ecological functions, and extrinsic function consisting of social, economic and architecture function.

The role of such an important GOS in the urban environment, and the rapid development of the construction in Makassar, encourages researchers to conduct a study about the structure the spread GOS in the Makassar, by using the regulation of the Minister of public works No. 5 in 2008. The results of this research are expected to be a material of reference for authorities in the development of GOS in Makassar, as well make Makassar as sustainable city.

2. THEORITICAL REVIEW

Theory of the greenhouse gases that cause the Earth's warming coined the first time around 1820 by mathematicians France, Baron Jean Baptiste Fourier [8]. They argued that the Earth's atmosphere formed from the composition of the gas (CO2, water vapor, and methane) behave sort of transparent glass that envelops the Earth. If the gases forming the Earth's atmosphere acts as a blanket do not exist, then the rest of the Earth's heat from the Sun will be released back into space resulting in earth being frozen. A classic example is the role of CO2 in the atmosphere of the planet's temperature settings that occur on the planet Venus. The CO2 concentration in the atmosphere of Venus is very high resulting in a temperature of this planet is so high so as not to allow a life conducted therein [9].

Reduced number of a certain broad unity in the vegetation of the Earth's surface as a result of the construction of the city, housing, and the opening of agricultural land, is greatly reducing the amount of CO2 absorbed herbs. This gave rise to a natural phenomenon called global warming. The ability of vegetation to absorb the CO2 in the air is evidenced by Charles Keeling [10] at Hawaii research institutions. This research was conducted at the four seasons. It found the CO2 concentration reached a maximum in late winter when the tree lost all its leaves, as well as achieve the minimum points during the late summer when the tree has leaves that are very dense.

The ability of plants to absorb carbon dioxide is known through research by experts. One of them is research on the function of plants in the reduction of pollutants [11]. They found that the Angsana and Flamboyant can reduce CO to (70%) and SO2 amount (50%), acid can reduce CO to Kranji (80%) and SO2 (90%), Kiara Umbrella reduces CO (70%) and SO2 (60%), and Bougenvile dust can hold up to 70%. Other trees with the ability of absorption of CO2 are a very large tree, Trembesi able to absorb 28.488,39 kg CO2/trees e year.

Results of other studies with similar findings [12] examined the potential of the plant in absorbing CO2 and CO to reduce the effects of global warming. GOS is a manufacturer of oxygen, which is the functions have not been replaced [13]. As a benchmark, on a land area of 1,600 M2, of which there are 16-inch diameter tree canopies of 10 M can supply the oxygen (O2) of 14,0 liters per day. Every hour, one hectare of green leaves can absorb eight Kg CO2. It is equivalent to the CO2 exhaled by human breath around 200 people at the same time.

The ability of trees in producing oxygen is expressed also by Ahda Imran in Kusminingrum[12] that a single tree trunk can provide oxygen for breathing purposes for two people. Other studies have found a one-hectare GOS can produce 0.6 tons of oxygen for consumptio people per day [13].

GOS arrangement appropriately will be able to act to improve the quality of the atmosphere of the city, air refresher, lowering the temperature of the surface dust, swept the city, lowering the levels of air pollution, muffle noise. Embledon (1963), Carpenter (1975)[14] States 1-acre GOS can mute on seven db per 30 meters distance from the sound source at frequencies less than 1000 CPS or dampen the noise from 25 to 80 percent. Other studies have suggested that the plant cover an area of one hectare can filter dust up to 85 percent and lower the temperature to four degrees Celsius.

Open green space is an area or City Hall that is built, and its surface is covered by the plant that serves to protect habitat, environmental safeguards, means of network infrastructures, agricultural resources, improveing the quality of the atmosphere and support the preservation of water and soil. Green Open space in the city

ecosystem also serves to improve the quality of urban landscape for beauty and comfort, as well as enhance the quality of the environment and preservation of nature, consisting of a linear space or corridor, or island oasis room as stops [15].

GOS in urban areas is also used as a place for evacuation in case of natural disasters. Even in areas with a high intensity of natural disasters, GOS is designed to serve as temporary shelter to the residents of the city who have experienced disasters, such as earthquakes and fires. When disaster occurs, the GOS can be a safe place for a wide range of emergency services such as the provision of relief supplies as well as to set up a command center and medical assistance service [16]

Architecturally GOS can increase the value of the beauty and convenience of the city through the existence of city parks, flower gardens, and the green lines on the streets of the city. Meanwhile, the GOS can also have economic functions, either directly as an empty concession land-land into agricultural land/estate (urban agriculture) and the development of means of urban green tourism can bring in tourists.

In the meantime, the shape and arrangement of GOS structurally can be ecology and palynologic configuration. GOS ecological configuration is GOS based on landforms such as, protected area, hills, Border River, and border of the Lake. While the GOS configuration palynologic can be the spaces formed following the pattern of the structure of the city such as the GOS for housing, GOS for village, GOS for town, GOS town and regional or national parks.

Some cities abroad in planning GOS, put mileage based on GOS levels, such as: Rotterdam city requires a maximum of 250 mileage meter to House Block Greenspace, the maximum range is 400 yards to a Quarter of Greenspace and a distance of 800 meters for the District tempu Greenspace. Another description outlines the extent of the small park less than two acres of which can be reached on foot from the home environment. Intermediate extent of 20 ha park with the distance of 1.5 km from the housing and a large park which covers a minimum of 60 ha with a distance of 8 km from the housing [17].

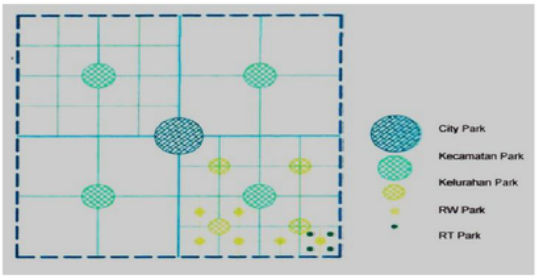
Setting GOS needs and structure of urban green space in the area arranged in a hierarchy based on Government Regulation of the Minister of Public Works No. 5 in 2008 as shown in Table 1.

Table 1. Provision GOS Based Population Regulation of the Minister of Public Works No. 5 in 2008

No	Environmental Unit	GOS type	Minimal broad /unit (m^2)	Minimal broad /Kapita (m^2)	Location
1	250 soul	Neighbourhood (Rukun Tetangga /RT) Park	250	1,0	Amid the RT Environment
2	2500 soul	**Community Assosiation (Rukun Warga /RW) Park**	1250	0,5	Activity centered RW
3	30.000 soul	**Village Park**	9000	0,3	Grouped by School / Centre Village
4	120.000 soul	**District Park**	24.000	0,2	Grouped by School / Centre Subdistrict
		Funeral	Be adapted	1,2	Spread
5	480.000 soul	**City of Park**	144.000	0,3	The center region / city
		Forest City	Be adapted	4,0	In / Region suburb
		For certain functions	Be adapted	12,5	Customized Needs

Source: *Regulation of the Minister of Public Works No. 5 in 2008[18]*

Meanwhile, if viewed by a hierarchical structure of space, the structure of urban green space as shown in Figure 1.



Source: *Adapted and Modified by Regulation of the Minister of Public Works No. 5 in 2008*

Fig. 1. *Urban green space Deployment Model Structure*

3. MATERIALS AND METHODS

This study was conducted in March 2013 to May 2013. Samples were determined using the sampling method aims (purposive sampling) by taking into account the presence of green space that can be observed. The

study focused on the downtown area with the consideration that the downtown area to experience the development of rapid development; the exploitation of land is very high, so that the necessary studies to look at the spread of green space in it. Based on these considerations was chosen District of Ujung Pandang, Makassar Sub-district and District Bontoala considered as a representation of the downtown area.

Furthermore, each of the Districts was deliberately chosen four villages, namely New Village, Village Bulogading, Village and Village Sawerigading Maloku as a sample for the District of Ujung Pandang. The Maricaya Village, Village Maradekaya, Baraya Village North and Sub-Baraya Lariang Bangi as a sample for the District of Makassar. Gaddong Urban Village, New Wajo Village, the Village and Village Baraya Bontoala as samples for the District Bontoala, then each village was chosen one of the Community Assosiation (Rukun Warga/RW) and neighbourhood (Rukun Tetangga/RT)

Engineering analysis using analytical techniques that illustrate the percentage of green space and open space field of the Minister of Public Works No. 5 in 2008 as well as green space based on population-based hierarchical regions. Subsequent analysis technique used is schallogram table analysis technique to look at the hierarchy of the availability of green space for each unit area also describe the structure of its spread. Based on the description of the table can be calculated schallogram COR (Coeffisient of Refroducibility) that is a percentage of the quotient between the number of table cells are filled with a whole number of table cells. In equation, form can be described COR = (A / Q) x 100, with a description of the symbol A = numbers of table cells are filled, Q = Number of table cells as a whole.

Schallogram technique is one of the analytical tools used to assess the completeness and enforceability of hierarchy levels a unit function facility environment Schallogram analysis technique is widely used by geographers, demographers and planners to analyze the availability of facilities in urban hierarchy level. [19].

4. RESULTS AND DISCUSSION

Distribution of open space in the District of Ujung Pandang, based on the results of the survey distribution of green space in the district of Makassar Sub sample basis as shown in Table 2.

Table 2. Distribution of GOS According to Village In District Ujung Pandang

No	Urban Village	Regional Extensive (Ha)	Population	GOS Government Regulation of the Minister of Public Works No. 5 in 2008. (M^2)	Based on the number of residents RTH (M^2)	Ground GOS		Meet Government of the Minister of Public Works No. 5 in 2008.	Based on the number of Residents Meet
						GOS Name	Broad (M^2)		
1	Baru	21	1.558	9.000	467.4	Karebosi Ground	73.000	M	M
2	Sawerigading	41	1.585		475.5	Hasanuddin Ground	19.500	M	M
3	B ulogading	23	2.703		810.9	Macan Park Pattimura Park Benteng Park Slamet Riadi Park	10.638 1.601 6.935 1.439	M	M
4	Maloku	20	1.558		467.4	T.Hasanuddin	7.050	TM	M

Sources: *Survey Results and Analysis 2013. Ket : M = Fullfilment, TM = Not Fullfilment*

In table 2, New Village has GOS Karebosi Field Complex, placed in the hierarchy views of the city area, this green space as well as the Village green space for New Village, also serves as a green space for the District-Level District of Ujung Pandang and green space for the city of Makassar. Based on the existing area, the open space to the Village Level and District Level very meet to even exceed the extents of Public Works Government Regulation No. 5 of 2008.

An examination of the total population, Makassar Sub-district with a population of 27 160 inhabitants, with a standard 0.2 M^2 District of green space per inhabitant then GOS District Level 5432 that there should be an area of M^2, whereas for a New Village with a population of 1,558 souls, with standard GOS 0.3 M^2 per population, the level of Urban green space that must exist an area of 467 m^2.

If seen by an area, New Village wide by 21 hectares or 210,000 M^2, if 30 percent of the area is green space, the New Village should have an area of 63,000 m^2 of green space. If 20 percent of the open space is open space that must be provided by the government, the breadth is 42,000 M^2. Ten percent of the rest of the green space is part of the public participation in the form of green space home page and page's office and zoned as private open space. Based on the description of aspects of population and area and government regulations, it appears that GOS District Level and GOS Sub Level for New Village Square complex than the vast green space Karebosi very fulfilling.

Based on the description of aspects of population seen that GOS District Level and Sub Level for New Village Square complex than the vast green space Karebosi very fulfilling. From the analysis based on population, GOS seen a vast difference large enough to GOS as it is regulated by the government of the Minister of Public Works No. 5 in 2008.. This difference is caused by the considerable differences between the population of the city according to a hierarchy set by government regulation of the Minister of Public Works No. 5 in 2008 with a population that is in the field.

There is open space in the Village Square Sawerigading Hasanuddin, in terms of area, green space meets the requirements as a green space for the Village-Level Sub Sawerigading as stipulated in Government Regulation of the Minister of Public Works No. 5 in 2008. When viewed from the aspect of population with a population of 1,585 souls, then GOS Village Level, which must exist an area of 476 m^2. If this vast area of green space in comparison to Hasanuddin Field, then to the Village-Level Sawerigading GOS urban village is very fulfilling.

If visits by Sawerigading Village area which covers 41 hectares or 410,000 M^2, if 30 percent of the area is green space, the open space required is 123,000 m^2. If 20 percent of the area is a government obligation, the green space that must be provided is 82,000 M^2. If the area is compared to the vast open space of Hasanuddin Field, which covers 19,000 M^2 does not satisfy.

In the Village, Bulogading GOS, there are five locations, three locations: GOS Tigers Parks, Wildlife and Parks Pattimura Fortress is an active green space with a sense of open space can be accessed by Bulogading Village residents to move in it, while GOS Park Slamet Riadi as passive open space or green space not to move above. Based on the extent of the existing green space park Tigers qualify as green space for the Village-Level Sub Bulogading.

When viewed from the aspect of population Bulogading Village, with a population of 2,703 inhabitants, should have an area of 811 GOS Village level M^2. From the aspect of population is associated with a wide-open space that is owned by the Village Level Bulogading the vast green space urban village is very fulfilling. Meanwhile, if viewed from the vast area of the government's obligation to prepare 20 percent or area of 46,000 M^2, from the aspect of green space in the Village Bulogading not meets.

There is open space in the Village Park Maloku Hasanuddin. Based on existing open space area does not meet the level of the Village area of open space as set out in Government Regulation of the Minister of Public Works No. 5 in 2008. When viewed from the aspect of population Maloku Village, with a population of 2,531 inhabitants, should have an area of 759 GOS Village level M^2. From the aspect of population is associated with a wide-open space that is owned by the Village-Level Maloku the vast green space urban village is very fulfilling. Based on this analysis it appears that Maloku In the Village, the Village Level GOS insufficient extent by government regulation of the Minister of Public Works No. 5 in 2008. whereas when viewed from the side of population is very fulfilling.

If seen by an area in the Village Maloku, should have green space of 60,000 M^2 with reference to 30 percent of the area is green space. If 20 percent of the open space is the obligation of the government, then the government should preparing an area of 40,000 m^2 of green space. GOS Hasanuddin Park area of 7,050 m^2, the green space requirements in this district do not meet.

From the aspect of providing GOS in neighbourhood (Rukun Tetangga/RT) and Community Assosiation (Rukun Warga/RW) based on survey results obtained, besides neighbourhood and community association that occupied of GOS, the villages level are Baru, Sawerigading, Bulogading and Maloku, not found any facilities GOS in neighbourhood and community association in another location.

From the aspect of dissemination of GOS in Sub-district of Ujung Pandang, based on a survey been seen in four villages become a sample, each villages has a GOS in Sub-district level. The spread was seen following the pattern of the development of urban design and structured according to the hierarchy of the GOS of Sub-district of Ujung Pandang level and GOS of village level. Creation of GOS planologis pattern in the Sub-District of Ujung Pandang is part of the facilities 17 ronment purposely held when Makassar colonized by Netherlands.

Distribution GOS in Makassar, based on the results of the survey the spread GOS in Makassar Sub-district based on samples of the villages as shown in table 3.

Table 3. Distribution of GOS Based on Villages of Makassar Sub-district

No	Villages	Width of Area (Ha)	Popuation	GOSRegulation of Minister of Public Work 5/2008 (M2)	GOS Based on populati on (M2)	GOS of Field		Provide Based on Regulation of Minister of PU 5/2008	Provide Based on Population
						GOSs' Name	Width (M2)		
1	Maricaya	26	5.901	9.000	1.770	-	-	TM	TM
2	Maradekaya	13	4.209		1.263	T.Kerung-Kerung (P2KH)	5.000	TM	M
3	Bara-Baraya Utara	11	5.909		1.773	-	-	TM	TM
4	Lariang Bangi	20	4.446		1.334	-	-	TM	TM

Source: *Analysis Result 2013. Ket : M = Fullfilment, TM = Not Fullfilment*

In table 3 in Maradekaya village there is a GOS P2KH Kerung-Kerung Park 5,000 M^2. Based on total area of GOS according to Regulation of of the Minister of Public Works No. 5 in 2008 is insufficient as a GOS as village level. However, if seen from the aspect of a population totaling 5.909, Maradekaya Village should have a GOS as Sub-District level 177,7 M^2, then the GOS P2KH Kerung-Kerung Park meet GOS as a village level. Whereas if seen by area should have a 39.000 M^2 GOS with reference of 30 percent of the total area is GOS. Based on these numbers is not very fulfilling.

This GOS is support of the Central Government, part of the Green City Development Program. It is built of elements which represent things to the attention of the Green City Program, such as Green Energy, Green Transportation, Green Pedestarian, and Green Water. Green energy is implemented with the use of solar energy to generate electricity while the green water by making the well infiltration as container and infiltration water that could help in the provision of water in dry season.

The development of this GOS is GOS into Sub-district level allows do considering the surrounding empty land still belongs to the Government of Makassar. Views in the position of Kerung Kerung Street the GOS is not invisible, because it is far enough and enclosed by buildings if UPTD Office for siphoning of feces. This condition also causes the citizens of the village Maradekaya not maximum to use this GOS.

Three other Villages into the sample which are Maricaya, Lariang Bangi and North Bara-Baraya not found any GOS level of the village. Likewise for GOS neighbourhood (Rukun Tetangga/RT) and Community Assosiation (Rukun Warga/RW) besides neighbourhood and Community Assosiation were assigned GOS P2KH Kerung-Kerung Park, not found any GOS in neighbourhood/Community Assosiation level and elsewhere.

There other types of GOS in sub-district of Makassar with good accretion trees are GOS of streets line in Urip Sumoharjo Street, Latimojong Street, Sungai Saddang Street, Monginsidi Street, Kerung-Kerung Street and Veteran Street.

Based on description GOS in Sub-district of Makassar, seen that GOS of Sub-district level not found, while for the village level of the four villages as a sample, only one village that has GOS the level of the village. Not found any dissemination of good GOS to GOS of Village Level as well as GOS of neighbourhood and Community Assosiation. As seen from a position that laying down and grouping with other city facilities, it is GOS can see in a group of city facilities that do not support, which is the UPTD for siphoning feces

Distribution GOS in Bontoala Sub-district, based on the results of the survey of the distribution of GOS in Bontoala sub-district, based on a sample of village as shown in table 4.

Table 4. Distribution of GOS Based on Sub-district in Bontoala

No	Villages	Width of Area (Ha)	Popuation	GOS Regulation of Minister of Public Work 5/2008 (M2)	GOS Based on population (M2)	GOS of Field		Provide Based on Regulation of Minister of Public Work 5/2008	Provide Based on Population
						GOSs' Name	Width (M2)		
1	Gaddong	25	4.335	9.000	1.301	-	-	TM	TM
2	Wajo Baru	13	4.646		1.394	T.aman Maccini	3.400	TM	M
3	Baraya	21	5.806		1.742	-	-	TM	TM
4	Bontoala	13	1.836		551	-	-	TM	TM

Source: *Analysis Result 2013. Ket : M = Fullfilment, TM = Not Fullfilment*

In table 4, in Wajo Baru village, there is a GOS of Maccini Park with an area of 3,400 M^2. Based on the extent incompatible with the GOS of neighborhood level is not extensive with Regulation Minister of Public Works No. 5 in 2008.. Seen from the aspect of population, the village had a population of 4.646 in Wajo Baru, requires a GOS level of Village 1,394 M^2. So viewed from the aspect of the population could be classed as GOS of Maccini village as GOS of Village level in Wajo Baru Village. But if viewed from an existing facility in GOS this is not intended as a GOS environment unit that can be used by people to relaxing. If seen by area, spacious GOS that must be provided by the Government based on laws mandate of 20 percent or 26,000 M^2. If this area is compared to a broad GOS in Maccini Village was very insufficient.

Maccini Village including a GOS passif, there are no facilities within that allows people to activity. GOS occupies a very strategic position, at the end of the axis of the city from East and be developed into GOS greeter in entering the central area of the city. Three other Villages into the sample which are Gaddong, Bontoala and Baraya facility can not found GOS the level of the village.

In Baraya village there is a field of Al-Markaz Mosque that could be developed into a GOS facility. Adjacent to the AL-Markaz Mosque, there is an empty land former Hall of Med Faculty of Hasanuddin University that can also be developed into GOS. This land is developed into a potential GOS sub-district level, and it is located in the building of mutual support that developed into GOS.

Already mentioned GOS in Bontoala there is also a GOS type of green line road. GOS of this type there are on Andalas Street, Bandan Street, Mesjid Raya Street, Gunung Latimojong Sreet and North Veteran Street with trees growing conditions are quite dense.

Based on the description of the GOS in Bontoala Sub-district, seen that Bontoala did not have the structure GOS composed and distributed according to the level of a hierarchy that is set in areas such Regulation of the Minister of Public Works No. 5 in 2008..

If the distribution of GOS views based on the GOS level of sub-districts and cities then its analysis results as shown in table 5.

Table 5. Distribution of GOS Sub-district and City

No	Villages	Width of Area (Ha)	Popuation	GOS Regulation of Minister of Public Work 5/2008 (M2)	GOS Based on population (M2)	GOS of Field		Provide Based on Regulation of Minister of Public Work 5/2008	Provide Based on Populati on
						GOSs' Name	Width (M2)		
1	U.Pandang Village	263	27.160	24.000	5.432	Karebosi Field	73.000	M	M
2	Makassar Village	252	82.478		16.496	-	-	-	-
3	Bontoala Village	210	54.714		10.943	-	-	-	-
4	Makassar	17.577	1.352.136	0.3/org	405.641	Karebosi Field	73.000	TM	TM

Source: *Analysis Result, Ket : M = Fullfilment, TM = Not Fullfilment*

It seen in table 5, GOS Sub-district level is only found in Ujung Pandang Sub-district while Makassar and Bontoala sub-district do not have the GOS level of sub-districts.Based on Regulation of Minister of PU No. 5 in 2008, Makassar and Bontoala sub-district requires GOS level of sub-district of 24.000 M^2, then based on population the Makassar sub-district needs 16.496 M^2, while the Bontoala subdistrict needs 10.943 M^2.

If seen appropriation of GOS city level looked to the significant weaknesses. The Karebosi Field Complex is categorized as GOS city level width area 73.000 M^2 only, while the population of GOS city level that needed 405.641 M^2, the level of its fulfillment is only 18 percent.

Based on the description of the needs of GOS sub-district and city Level, then appropriate mandate the Government of Makassar legislation obliged hold GOS that does not exist. The fulfillment of this GOS also for the creation of Makassar environment to be comfortable occupied, which in turn creates the living conditions of the dynamic and productive for the citizens of city a vibrant and productive.

Based on GOS condition per sub-district has been described before, then in the table skalogram GOS availability can be described based on sub-districts level and based on the GOS of units as in table 6.

Table 6. Skalogran Distribution of GOS

No	Types	Units	GOS City Level	GOS Sub-district Lvl	GOS Village Lvl	GOS Community lvl	GOS Neighbourhood lvl	Urban Forest	Green Line Street	Number of Filled in Cells	Annotation
1	Ujung Pandang Sub-district.	Baru	X	X	X	-	-	-	X	7	Rank I
		Sawerigading			X	-	-				
		Bulogading			X	-	-				
		Maloku			X	-	-				
2	Makassar Sub-district	Maricaya		-	-	-	-	-	X	2	Rank II
		Maradekaya			X	-	-				
		Bara-Baraya Utara			-	-	-				
		Lariang Bangi			-	-	-				
3	Bontoala Sub-district	Gaddong		-	-	-	-	-	X	2	Rank II
		Wajo Baru			X	-	-				
		Baraya			-	-	-				
		Bontoala			-	-	-				
Number of Filled in Cells (A)			1	1	6	0	0	0	3	11	
Rank			III	III	I	IV	IV	III	II		
Total Number of Filled in Cells (Q)			46								
COR = (A/Q) x 100			24 Percent								

Source: *Analysis Result, 2013.*

In table 6, Ujung Pandang ranks top in the distribution of GOS according to the environmental unit, whereas if viewed by type GOS that is present in each unit of area, looks GOS the level of the village is the most GOS types, then followed GOS the type of Green Line Street. The percentage distribution is based on the observed sample of 24 percent.

5. CONCLUSION

GOS in the city of Makassar was not distributed following the pattern of development of urban planologis structure as regulated in the Regulation of the Minister of Public Works No. 5 in 2008.. From three sub-districts that became sample that only of Ujung Pandang sub-district that it's had GOS structure arranged according to the level of the hierarchy to dictate the level of the village. GOS of neighbourhood and Community Assosiation are not identified on all samples. The Karebosi Field complex dikategotikan as GOS city level of the polygons have not sufficient based on of the Minister of Public Works No. 5 in 2008. The Karebosi Field complex is categorized as GOS the level of the city from the width of field have not sufficient based on Regulation such Regulation of the Minister of Public Works No. 5 in 2008. Makassar supposed to have GOS city level based on population of 405.641 M^2, where as available only of 73.000 M^2, so the percentage of fulfillment of 18 percent.

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